

REMARKS

This Response, filed in reply to the Office Action dated November 13, 2007, is believed to be fully responsive to each point of objection and rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 5, 7, 12 and 21 are all the claims pending in the application. Claims 5, 7, 12 and 21 are rejected. Claims 5, 7, 12 and 21 are amended. The amendments to Claim 12 are solely to improve clarity. Support for the amendments to Claims 5, 7 and 21 can be found throughout the specification, and at least at the following.

Support for the amendment to Claim 5 can be found at, for example, paragraph [0035] and paragraphs [0078]-[0081] of the published specification. Support for the amendment to Claim 7 can be found at, for example, paragraphs [0030] and [0039] of the published specification. Support for the amendment to Claim 21 can be found at, for example, paragraph [0035] and paragraphs [0078]-[0081] of the published specification. No new matter is added by way of these amendments. Entry and consideration of this amendment are respectfully requested.

Information Disclosure Statements

Applicants thank the Examiner for acknowledging consideration of the Information Disclosure Statements filed December 22, 2005 and April 5, 2007.

Claims 5, 7, 12 and 21 Are Definite Under 35 U.S.C. § 112

On page 2 of the Office Action, Claims 5, 7, 12, and 21 are rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite. First, the Examiner alleges that the claimed invention is incomplete because it omits essential steps, namely the active method step of detection. The Examiner contends that the amplification step does not inherently include a detection step.

Solely to advance prosecution, and without acquiescing in the rejection, Applicants herewith amend Claims 5 and 7 to recite positive steps involved in the method of detecting SARS coronavirus, and for diagnosing animals afflicted with severe acute respiratory syndrome (SARS), respectively. Support for these claim amendments can be found throughout paragraph [0030], and in the first line of paragraph [0039], of the published specification. Applicants respectfully submit that the amendments overcome this aspect of the rejection.

Second, the Examiner asserts that recitation of the limitations “the F3c, the F2c, and the F1c regions” and “the R3, the R2, and the R1 regions” in Claim 12 is indefinite in that insufficient antecedent basis exists for such limitations.

Solely to advance prosecution, and without acquiescing in the rejection, Applicants herewith amend Claim 12. Applicants respectfully submit that the amendment overcomes this aspect of the rejection.

Accordingly, withdrawal of the rejection is respectfully requested.

Claims 5, 7, 12 and 21 Are Proper Under 35 U.S.C. § 112

On page 3 of the Office Action, Claims 5, 7, 12, and 21 are rejected under 35 U.S.C. § 112, first paragraph, for allegedly introducing new matter.

The Examiner asserts that recitation of “an oligonucleotide primer comprising at least 15 contiguous nucleotides of SEQ ID NO: 17, 18, 19” was not contemplated in the disclosure at the time the application was filed, and thus, is new matter. The Examiner acknowledges that Applicants refer to Claim 2 and paragraph [0032] of the published application as written support for such an amendment, however, the Examiner contends that these portions do not explicitly or inherently provide support for the amendments because Claim 2 as originally presented recites an oligonucleotide primer comprising at least 15 contiguous nucleotides selected from the nucleotide sequences as shown in SEQ ID NOs: 2-13.

Further, the Examiner alleges that paragraph 2 of the originally filed specification only describes primers that comprise preferably 15 nucleotides, rather than reciting that the primers comprise 15 contiguous nucleotides from explicit nucleotide sequences, such as SEQ ID NOs 17-19. The Examiner contends that the skilled artisan, although recognizing that primers of 15 nucleotides in length could be used for the claimed invention, would not recognize that primers of 15 contiguous nucleotides of explicit sequences would be functional within the claimed invention because the specification does not disclose that the entire nucleotide sequences of SEQ ID NOs: 17-19 are not necessary.

With regard to SEQ ID NOs:17 and 18, in the interest of compact prosecution, and without agreeing with the rejection, Applicants herewith amend Claim 5 to recite that the first primer “comprises SEQ ID NO:17” and the second primer “comprises SEQ ID NO:18.” Applicants maintain that such primers are adequately described within the specification, since such primers are explicitly recited in paragraph [0035] of the published specification, and paragraphs [0078]-[0081] experimentally demonstrate the use of such primers in a LAMP PCR reaction. Thus, such primers find sufficient support within the specification as filed.

With regard to the third and fourth primers, that is, those primers which comprise at least 15 contiguous nucleotides of SEQ ID NO: 10 and 19, respectively, Applicants respectfully submit that the specification provides sufficient support for such primers such that these limitations do not constitute new matter. Specifically, paragraph [0032] of the published specification discloses that a primer comprising a “nucleotide sequence selected from F3” is an OPF primer, and that a primer comprising a “nucleotide sequence selected from R3” is an OPR primer. Further, paragraph [0035] of the published specification explicitly discloses that SEQ ID NO:10 is an OPF primer and that SEQ ID NO:19 is an OPR primer.

Applicants respectfully submit that one of skill in the art of oligonucleotide design would fully understand from reading the instant application that because OPF and OPR primers only bind to one target sequence, the primer sequence should thus be complementary to contiguous nucleotides on the target sequence. Further, one skilled in the art of primer design and nucleic acid hybridization would understand that when designing a primer to hybridize to a single target nucleotide, it is preferable that the primer contain a significant stretch of contiguous nucleotides complementary to the target sequence, such that efficient and stable hybridization occurs. One of skill in the art would realize that a primer comprising at least 15 contiguous nucleotides from either SEQ ID NOs:10 (for OPF) or 19 (for OPR) would contain a sufficient number of complementary nucleotides so as to allow the formation of a stable duplex between the OPF or OPR primer and the target nucleotide, to permit LAMP amplification.

Further still, Applicants disagree that such a limitation constitutes new matter in view of the fact that paragraph [0032] of the published specification provides explicit written support for such primers, stating that “[the primers of the invention, which includes OPF and OPR primers, have] at least 10 nucleotides, and preferably at least 15 nucleotides.” (Emphasis added.)

Paragraph [0035] of the published specification explicitly describes that SEQ ID NO:10 is an OPF primer (“OPF-B”) and that SEQ ID NO: 19 is an OPR primer (“OPR-B”). One of ordinary skill would realize that a primer comprising at least 15 contiguous nucleotides of either SEQ ID NO:10 or 19 could also be used in the claimed method, given that the OPF and OPR primers only need to hybridize to a single target sequence. As the primers of Claim 21 also only hybridize to a single target sequence, Applicants submit that the primers of Claim 21 are sufficiently described within the specification for at least the same reasons as presented above.

Accordingly, withdrawal of the new matter rejection is respectfully requested.

Claims 5, 7, 12 and 21 are Adequately Described Under 35 U.S.C. § 112

On page 5 of the Office Action, Claims 5, 7, 12 and 21 are rejected as allegedly failing to comply with the written description requirement.

The Examiner alleges that the claims encompass nucleotide sequences complementary to a sequence of at least 15 contiguous nucleotides of SEQ ID NO: 17, such as, a 6-mer, 7-mer, or 8-mer. Thus, the Examiner alleges that the claimed invention does not require that the complementary oligonucleotides be of any particular length.

Solely to advance prosecution, and without acquiescing in the rejection, Applicants herewith amend Claims 5 and 21 to recite that the nucleotide sequences are “entirely complementary.” Applicants respectfully submit that the amendments overcome the rejection.

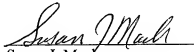
Accordingly, withdrawal of the rejection is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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